

Work Order ID 152985***152985***

Page 1

Monday, November 07, 2016 4:07:46 PM

Item ID: D412-704-045

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cable Assembly

Start Date: 10/31/2016 Start Qty: 3.00

3

Cust Item ID:

Required Date: 11/7/2016 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals: Process Plan: **DAS** Date: **NOV 09 2016**

Tooling:

Date:

Run Start ***NR1***QC: **21**

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

DSI9611	A
---------	---

IIN D412-704	C
--------------	---

100

0.00

100

Small Fab

Small Fab

Memo

0.10

Small Fab

Assemble as per dwg

3 FF NOV 21 2016

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Memo

0.01

Quality Control

3 DAS 38 9-88 NOV 22 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY					
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	☐	Past Due ☐						

Monday, November 07, 2016 4:07:46 PM

152985

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

3

Cust Item ID:

Start Date: 10/31/2016 **Start Qty:** 3.00

Required Date: 11/7/2016 **Req'd Qty:** 3.00

3

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Set Up/ Run Hours

Tool ID**Tool #**

Accept Qty

Reject
Qty

Reject Number

**Insp.
Stamp**

120

Identify as per dwg & Stock Location: 213

0.00

120

Packaging

Memo

0.00

Packaging

130

QC21- Final Inspection - Work Order Release

0.00

130

QC

Memo

0.05

Quality Control

DAS
6
9-89

NOV 13 2016

16/11/24

DAS
21
9-89 NOV 24 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Monday, November 07, 2016 4:07:45 PM

Page 1

Work Order ID: 152985

152985

Parent Item: D412-704-045

D412-704-045

Parent Item Name: Cable Assembly

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP Rev:B05.01.28 Added Figures 1-2KJ/RF
IPP Rev:C 08-10-08 as per revB DD verified by:EC IPP REV:D
12.05.10 per DSI 9611 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN3-10A

Purchased

No

100

Each

219.0000

1

3

NOV 17 2016

DAS
6
9-89

AN3-10A

Bolt

**

Location

Loc Qty

Loc Code

GA

2

m132763

1

m134573

1

over003

100

m135966

100

ST349

117

m134249

56

m134943

1

m135530

60

AN3-5A

Purchased

No

100

Each

228.0000

1

3

NOV 17 2016

DAS
6
9-89

AN3-5A

Bolt

**

Location

Loc Qty

Loc Code

FP001

155

m134502

155

ST350

73

m135058

73

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐						

Picklist Print

Monday, November 07, 2016 4:07:45 PM

Page 2

Work Order ID: 152985

152985

Parent Item: D412-704-045

D412-704-045

Parent Item Name: Cable Assembly

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 3.00

Required Qty: 3.00

D3217-3 Manufactured No

100 Each 11.0000 1 3

D3217-3

Cable 80.5"

Location

Loc Qty

Loc Code

ST217

11

144532

1

148029

10

D3257-1 Manufactured No

100 Each 4.0000 1 3

D3257-1

Fitting

Location

Loc Qty

Loc Code

ST028

4

144773

4

D3258-1 Manufactured No

100 Each 3.0000 1 3

D3258-1

Angle Bracket

Location

Loc Qty

Loc Code

ST028

3

141486

3

NOV 18 2016

~~NOV 17 2016~~

DAS
6
9-89

~~NOV 17 2016~~

DAS
6
9-89

NOV 17 2016

DAS
6
9-89

Monday, November 07, 2016 4:07:45 PM

Shop Packet Print

Page 2

Picklist Print

Page 3

Monday, November 07, 2016 4:07:45 PM

Work Order ID: 152985

152985

Parent Item: D412-704-045

D412-704-045

Parent Item Name: Cable Assembly

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 3.00

Required Qty: 3.00

MS21042L3 Purchased No

100 Each 2,237.000 2 6

MS21042L3

NOV 17 2016

DAS
6
9-89

Nut

Location	Loc Qty	Loc Code
FP001	7	
M130922	7	
GA	216	
m134360	108	
m135135	108	
OVER007	1200	
m135945	600	
M136044	600	
ST303	814	
m135530	211	
m135600	3	
<u>m135767</u>	600	

NAS1149D0332J Purchased No

100 Each 1,984.000 2 6

NAS1149D0332J

NOV 17 2016

DAS
6
9-89

Washer

Location	Loc Qty	Loc Code
FP001	178	
m134848	178	
GA	204	
m134848	204	
ST260a	1200	
m136015	1200	
ST264	402	
<u>m135672</u>	402	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

Picklist Print

Monday, November 07, 2016 4:07:46 PM

Page 4

Work Order ID: 152985

152985

Parent Item: D412-704-045

D412-704-045

Parent Item Name: Cable Assembly

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 3.00

Required Qty: 3.00

NAS1149D0363J

Purchased

No

100

Each

1,164.000

2

6

NAS1149D0363.J

NOV 17 2016 DAS

Washer

6
9-89

Location

Loc Qty

Loc Code

GA

336

m134055

336

ST263

828

m135864

828

NAS509-3

Purchased

No

100

Each

6.0000

3

9

NAS509-3

m136047X3 NOV 17 2016

DAS

Nut

6
9-89

Location

Loc Qty

Loc Code

ST551

6

M135058

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____ _____ _____			
Misidentified ☐	☐	Past Due ☐	☐				

DART SERVICE INSTRUCTION

TO AMEND IIN-D412-704 REV. C OR EARLIER
AND ICA-D412-704 REV. 4 OR EARLIER
REF CANADIAN STC SH93-34
REF FAA STC SR00957NY
REF EASA STC EASA.IM.R.00696

PURPOSE

The purpose of this Dart Service Instruction is to correct part number error in Installations Instruction IIN-D412-704 Rev. C or earlier and Instructions for Continued Airworthiness ICA-D412-704 Rev. 4 or earlier. The AN3-13A bolt should be replaced with an AN3-10A bolt in Figure 5 - Detail L in IIN-D412-704 and Figure 25-4 Detail L in ICA-D412-704. See sheet 2.

PART LIST CORRECTION

Revise Part Lists in IIN-D412-704 & ICA-D412-704 as follows:

NOW

Qty -043	Qty -045	Part Number	Description
X		D205-704-043	CABLE ASSEMBLY (205)
	X	D412-704-045	CABLE ASSEMBLY (210/212/214/412)
1	1	AN3-10A	BOLT

WAS

Qty -043	Qty -045	Part Number	Description
X		D205-704-043	CABLE ASSEMBLY (205)
	X	D412-704-045	CABLE ASSEMBLY (210/212/214/412)
1	1	AN3-13A	BOLT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 152985
1611-09

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

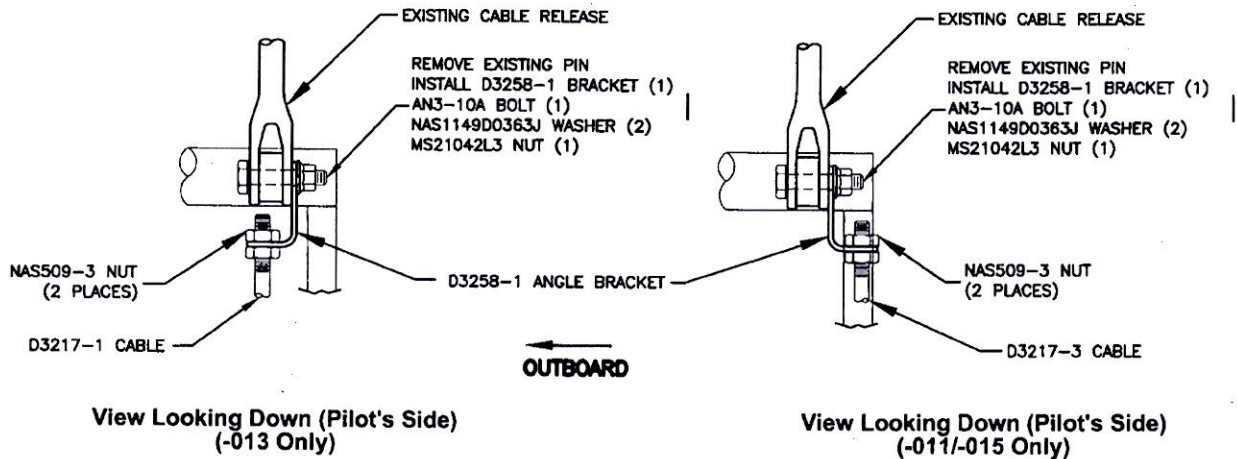
DATE: 12.05.07
CERT. NO.: SH93-34
ISSUE NO.: 2

A	NEW ISSUE (REF PAR)	RF	12.05.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9611	SHEET 1 OF 2
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	PART NUMBER CORRECTION	NTS
DATE	12.05.07	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

FIGURES CORRECTION

Revise Detail L Figure 5 of IIN-D412-704 and Detail L Figure 25-4 of ICA-D412-704 as follows:

NOW



WAS

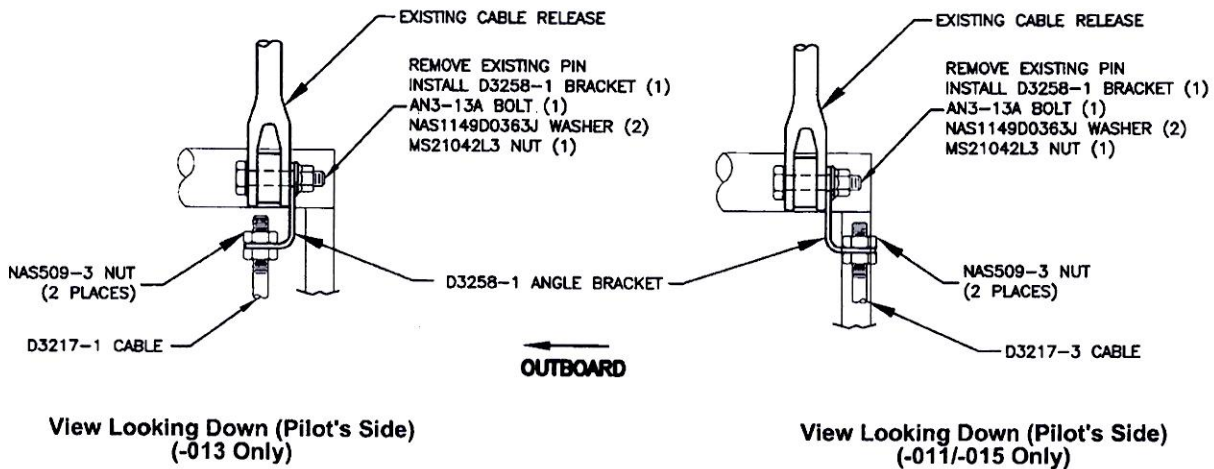
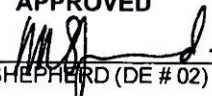


Figure 5 - Detail L or Figure 25-4 - Detail L

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 12.05.07
CERT. NO.: SH93-34
ISSUE NO.: 2

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9611	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		PART NUMBER CORRECTION	NTS
DATE	12.05.07	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	